

Resolving Environmental Disputes Through Collaborative Planning: A Case Study of Land-use Planning in British Columbia

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Abstract

A major challenge to sustainable management is resolving disputes among competing stakeholders over the use of natural resources. Recent literature proposes the use of innovative shared decision-making (SDM), or collaborative planning models, to resolve planning disputes.

The objective of this research is to assess the effectiveness of the SDM approach used to develop 17 land use plans covering 85 percent of the land base in British Columbia. The evaluation is based on the results of a survey conducted of 260 participants from 17 SDM processes to assess the degree to which the process met 25 evaluative criteria, and to assess the strengths and weaknesses of the processes.

Almost all 17 SDM processes achieved consensus agreements despite a previous history of intense conflict among competing stakeholders. Additional benefits included improved relationships, increased understanding, networks among diverse stakeholders, significant learning, and sharing of information. Participants also developed skills and an understanding of collaborative tools for future decision making.

The case study also identifies the limitations of SDM and the keys to successful SDM management including factors related to process design and external circumstances. If these factors are addressed, SDM are a feasible and valuable tool in resolving conflict and preparing plans.

Introduction

One of the primary challenges to sustainable management is resolving disputes among competing stakeholders over the use of scarce resources. In recent years, there has been growing interest in more collaborative processes to resolve disputes and prepare plans. These innovative approaches, which will be referred to as collaborative planning (CP), are founded on the principles of interest-based negotiation and consensus building, which attempt to collaboratively seek outcomes that meet the interests of all stakeholders.

Advocates argue that CP is an effective means of resolving disputes. Agreements reached through CP are more likely to be in the public interest because they attempt to meet the mutual objectives of all relevant stakeholders. CP agreements are more durable and easier to implement because they have broad stakeholder support. CP processes can also produce secondary benefits such as increased trust and cooperation among stakeholders that generate long-term benefits beyond an agreement (Innes and Booher 1999).

As Moote, McClaren, and Chickering (1997) observe, CP type processes, while widely advocated, are rarely evaluated to assess empirically their strengths and weaknesses. The purpose of this paper is to help address this deficiency in the literature by comprehensively evaluating one of the most extensive applications of CP to date: the preparation of 25 regional land use plans that will cover 85% of the province of British Columbia, Canada. To date 19 plans have been completed and six are in preparation. British Columbia (B.C.) is the only jurisdiction in which CP has been implemented systematically to develop land and resource management plans for the entire land base of the province. Therefore, the B.C. experience provides a unique opportunity for evaluation.

Case Study: Land Use Planning in British Columbia

British Columbia, which is Canada's third largest province, has a population of 4.1 million and an area of 95 million hectares, making it larger in area than California, Oregon, and Washington States combined. The British Columbia government owns and manages 94% of the provincial land base (Gunton and Fletcher 1992). In the 1980s, the conflict between extractive uses and preservation intensified into what became known as the "war in the woods," characterized by blockades and protests over harvesting of pristine old growth areas (Williams et al. 1998; B.C. CORE 1995). In response to increasing conflict at the end of the 1980s and early 1990s, the province sought a new approach to land use planning to replace the existing approach, which was based primarily on the Ministry of Forests managing land use planning with limited public consultation (Gunton 1991; B.C. CORE 1995).

The new approach adopted by the province is an innovative CP process involving key stakeholders in face-to-face negotiations in an effort to reach consensus land use agreements for recommendation to government. This process seeks involvement of all levels of government, First Nations, other stakeholders, and the general public to ensure a balance among environmental, economic, and social objectives and to create land use certainty (B.C. IRPC 1993). The CP process was defined by the province as meaning “that on a certain set of issues, for a defined period of time, those with the authority to make a decision and those who will be affected by the decision are empowered to jointly seek an outcome that accommodates rather than compromises the interests of all concerned.” (B.C. CORE 1992:25)

In 1992, the provincial government established, through legislation, the Commission on Resources and the Environment (CORE) (B.C. CORE 1994) with a mandate to develop and implement this new approach to land use planning. The province also set a goal of doubling the protected areas from 6% to 12% of the provincial land base and changing forest practices to protect better non-forestry uses. CORE was responsible for preparing land use plans in the four regions of the province experiencing greatest conflict, and for preparing an overall land use planning process for the rest of the province. CORE was abolished in 1996 and the management of the CP land use planning process was taken over by an interagency secretariat, the Land Use Coordinating Office (LUCO). It was charged with the task of completing land and resource management plans (LRMPs) for the rest of the province.

Although the approach evolved over the decade from 1992 to the present, the basic features as outlined in several key policy documents remain consistent. The first step after deciding to commence an LRMP for a region is to create a stakeholder table that represented the diverse interests involved. Stakeholder tables range from less than 15 to more than 70 participants and include government, resource, environmental, and community interests normally chosen on a sectoral basis. Participants at stakeholder tables are encouraged to maintain ongoing interaction with their sectoral interests to ensure accountable representation.

An independent chair is appointed to manage each LRMP process with the support of professional staff from government agencies who help manage logistics and provide information. In most cases, professional facilitators are hired to assist in conflict resolution and training workshops on relevant topics such as negotiation skills and land use analysis to prepare stakeholders for the process. Subcommittees of the tables are formed to analyze specific issues in detail and make recommendations back to the full stakeholder table. The general public is involved through outreach programs such as open houses and newsletters to ensure broad public input in the development of land use plans. Most stakeholder table meetings are open to the public.

The first task assigned to stakeholders is to prepare a terms of reference, which outlines objectives and procedures for the process. While these terms of reference must be consistent with the general principles and schedules determined by government, there is considerable leeway in the specific procedures. Most tables adopted a conventional analytical process of establishing objectives, developing options, evaluating options, and agreeing on a recommendation to submit to government for approval.

The technical information used in the planning process normally consists of a folio of biophysical maps summarizing key land use features. This information is used to generate suitability maps for alternative land uses, which are then used to formulate land use options. A special land analysis process to identify potential areas for protection based characteristics such as ecological uniqueness and ecological representation was conducted by technical teams who provided the results to the individual land use planning tables. The land use options were in most cases evaluated by a multiple accounts analysis that rated each option against a series of criteria relating to economic, social, and environmental effects. A final recommendation to be submitted to the provincial government for Cabinet approval is determined on the basis of a consensus reached through interest-based negotiation.

The plans include many recommendations on resource management. The principal recommendation deals with allocating land between competing uses through the use of land use zones. The land use plans result in a significant reallocation of land. Over the last decade, the proportion of the province designated as protected has doubled, rising from 6% to more than 12 %.

As of October 2002, 15 LRMPs were completed and approved by the provincial Cabinet and 6 more were underway. When four large CORE plans approved in the 1990s are included, plans have been approved for 73 % of the province. Six more LRMPs are currently in preparation that will raise the total to 85% of B.C. (fig. 1). Key characteristics of the case study processes are summarized in table 1. There is considerable variation in process characteristics in terms of number of stakeholders, length of the process, and area covered.

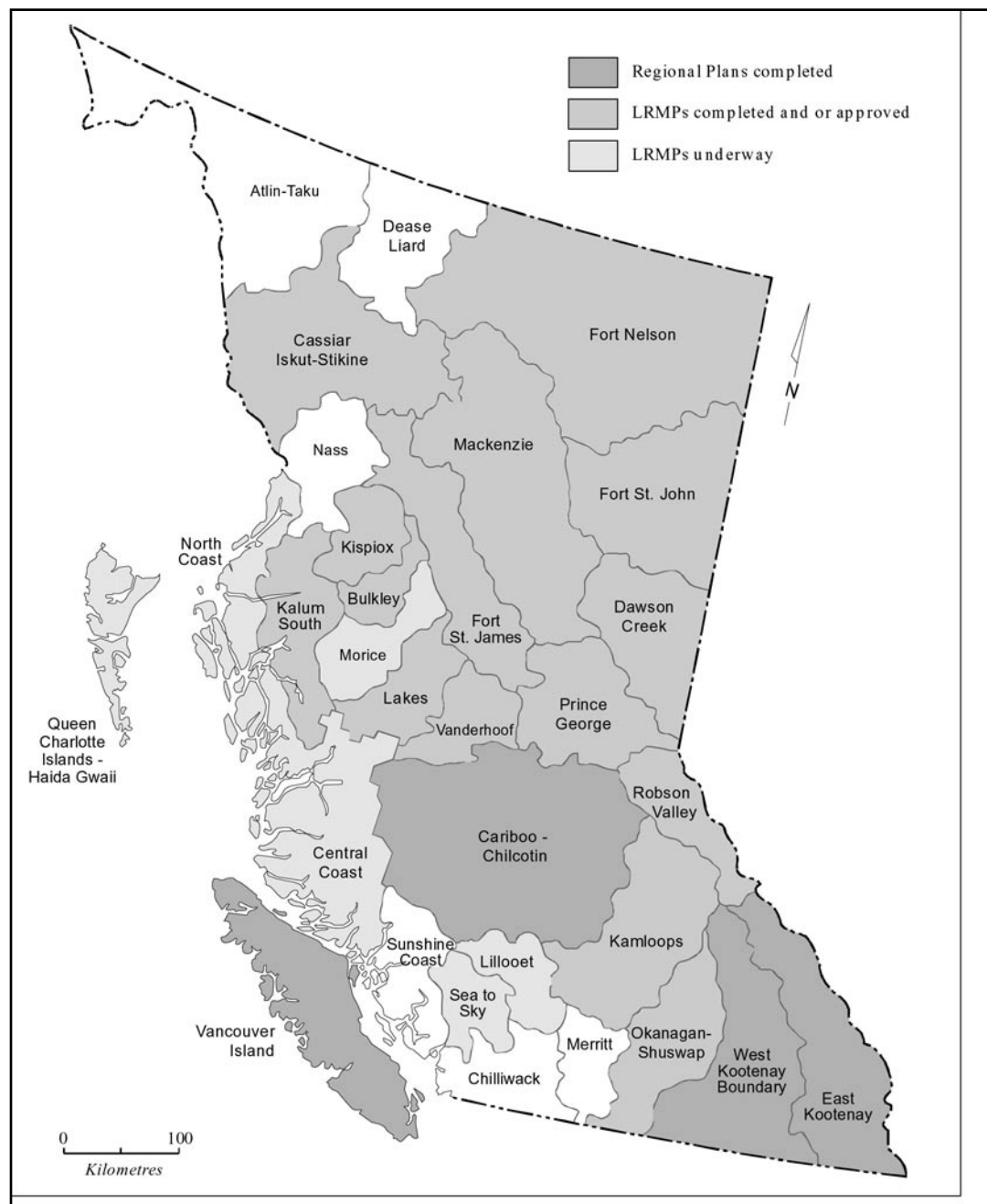


Figure 1. Status of strategic land use planning in British Columbia as of October 2002 (B.C. LUCO 2002a).

Table 1. Summary of Strategic Land Use Planning Processes in British Columbia; Size, Timelines, and Level of Agreement (B.C. LUCO 2002b).

Land Use Planning Process	Area (ha)	Date Initiated	Date Completed	Date Approved (In principle) Final approval	Level of Agreement
Regional CORE plans: tables negotiated and submitted report of deliberations; government then consulted on report and produced a land use plan.					
Vancouver Island	3,350,000	August 1992	October 1993	June 1994	No consensus
Cariboo-Chilcotin	8,375,000	January 1992	July 1994	October 1994	No consensus
East Kootenay	3,981,000	January 1992	June 1994	March 1995	No consensus
West Kootenay	4,251,000	January 1992	October 1994	March 1995	No consensus
Case Study LRMPs : Tables negotiated and produced land use plan which was submitted to, then approved, by government.					
Bulkley	762,000	January 1992	June 1996	(June 1997) April 1998	Consensus
Cassiar-Iskut-Stikine	5,200,000	February 1997	May 2000	October 2000	Consensus
Dawson Creek	2,900,000	June 1992	June 1998	March 1999	Consensus
Fort Nelson	9,800,000	February 1993	June 1996	October 1997	Consensus
Fort St. James	3,174,000	October 1992	Spring 1998	March 1999	Consensus
Fort St. John	4,600,000	January 1993	June 1996	October 1997	Consensus
Kalum South	2,100,000	1991	February 2001	April 2001	Consensus
Kamloops	2,200,000	October 1989	February 1995	June 1995	Consensus minus one
Kispiox	1,200,000	September 1989	May 1994	(May 1995) April 1996	Consensus
Lakes District	1,580,000	April 1994	November 1997	(August 1999) May 2000	Consensus
MacKenzie	6,400,000	August 1996	July 2000	November 2000	Consensus minus one
Okanagan-Shuswap	2,500,000	July 1995	September 2000	January 2001	Consensus
Prince George	3,400,000	December 1992	June 1998	January 1999	Consensus
Robson Valley	1,300,000	March 1993	May 1997	April 1999	Partial Consensus
Vanderhoof	1,380,000	October 1993	May 1996	January 1997	Consensus
Central Coast	4,800,000	July 1996	phase 1 April 2001	phase 2 in progress	ongoing
Lillooet	1,100,000	June 1996	options March 2001	in progress	ongoing

Method: Evaluating Collaborative Planning Processes

The framework developed for evaluating the case study CP processes is based primarily on an integration of five key frameworks proposed in the literature (Cormick et al. 1996; Duffy et al. 1998; Moote et al. 1997; Innes and Booher 1999; Wondolleck and Yaffee 2000). The framework also reflects the results of existing case studies and the work of several other scholars and practitioners in the field including Harter (1997), Campbell and Floyd (1996), Susskind and McMahon (1985), Menkel-Meadow (1997), and Bingham (1986). The criteria used in the evaluation consist of both process criteria, which define desirable features of process design as well as outcome criteria, which define desirable outcomes (table 2).

The key elements of the case study CP processes were documented. The description is based on a review of the case study planning processes to document procedural, institutional, and legal structures and process outcomes. A survey instrument was designed (Frame et al. 2002) and administered to participants in the case study CP processes to assess the extent to which these processes met the evaluative criteria. The final task was to analyze the overall study results and assesses the implications of the findings for CP theory and practice.

Table 2. Evaluative Framework: Process and Outcome Criteria for Evaluating Collaborative Planning Case Studies.

Process Criteria and Descriptions
<i>1. Purpose and Incentives:</i> The process is driven by a shared purpose and provides incentives to participate and to work towards consensus in the process.
<i>2. Inclusive Representation:</i> All parties with a significant interest in the issues and outcome are involved throughout the process.
<i>3. Voluntary Participation and Commitment:</i> Parties who are affected or interested participate voluntarily and are committed to the process.
<i>4. Self Design:</i> The parties involved work together to design the process to suit the individual needs of that process and its participants.
<i>5. Clear Ground Rules:</i> As the process is initiated, a comprehensive procedural framework is established including clear terms of reference and operating procedures.
<i>6. Equal Opportunity and Resources:</i> The process provides for equal and balanced opportunity for effective participation of all parties.
<i>7. Principled Negotiation and Respect:</i> The process operates according to the conditions of principled negotiation including mutual respect, trust, and understanding.
<i>8. Accountability:</i> The process and its participants are accountable to the broader public, to their constituents, and to the process itself.
<i>9. Flexible, Adaptive, and Creative:</i> Flexibility is designed into the process to allow for adaptation and creativity in problem solving.
<i>10. High-Quality Information:</i> The process incorporates high-quality information into decision-making.
<i>11. Time Limits:</i> Realistic milestones and deadlines are established and managed throughout the process.
<i>12. Commitment to Implementation and Monitoring:</i> The process and final agreement include clear commitments to implementation and monitoring.
<i>13. Effective Process Management:</i> The process is coordinated and managed effectively and in a neutral manner.
<i>14. Independent Facilitation:</i> The process uses an independent trained facilitator throughout the process.
Outcome Criteria and Descriptions
<i>1. Perceived as Successful :</i> The process and outcome are perceived as successful by stakeholders
<i>2. Agreement:</i> Process reaches an agreement accepted by parties.
<i>3. Conflict Reduced:</i> The process reduces conflict.
<i>4. Superior to Other Methods:</i> The process is perceived as superior to alternative approaches
<i>5. Innovation and Creativity:</i> The process produced creative and innovative ideas and outcomes.
<i>6. Knowledge, Understanding, and Skills:</i> Stakeholders gained knowledge, understanding, and skills by participating in the process.
<i>7. Relationships and Social Capital:</i> The process created new personal and working relationships, and social capital among participants.
<i>8. Information:</i> The process produced improved data, information, and analyses through joint fact-finding that stakeholders understand and accept as accurate.
<i>9. Second-Order Effects:</i> The process had second-order effects including changes in behaviors and actions, spin-off partnerships, umbrella groups, collaborative activities, new practices, or new institutions. Participants work together on issues or projects outside of the process.
<i>10. Public Interest:</i> The outcomes are regarded as just and serve the common good or public interest, not just those of participants in the process.
<i>11. Understanding and Support of CP:</i> The process resulted in increased understanding of, and participants support the future use of CP approaches.

LRMPs chosen for review include 17 LRMPs listed in table 1. The remaining LRMP processes underway were excluded because they are still in their preliminary stage of development. The participant survey was mailed, or emailed, to 767 of 894 possible participants from the 17 targeted LRMPs. The remaining could not be located. The survey was declined by 23 recipients due to a lack of involvement in the LRMP process. Two hundred sixty responses were received and form the basis of this analysis (response rate 35%). The confidence interval for the results of this study is $\pm 2.98\%$, 95% of the time. Of those who responded, 71% were involved for 75% or more of the process, and 54% for 90% or more of the process.

Participants responded to closed questions using a four-point scale of agreement or disagreement (strongly agree, somewhat agree, somewhat disagree, strongly disagree), or not applicable. The responses to these questions are summarized in the appendix by the percentage of responses in each category, and the overall weighted score by question. A coding system was developed to summarize participants' responses to open ended questions, and to calculate the frequency with which a particular response was made. Once coding was complete, the responses were grouped into themes to aid presentation and interpretation of the results.

Results: Process Evaluation

This survey shows that participants had strong incentives to negotiate and to reach an agreement. Participants were highly motivated (88%) by low BATNAs (best alternative to a negotiated agreement), which increased their willingness to negotiate. Low BATNAs existed because stakeholders knew that if they did not reach an agreement (86%), the provincial government would make a unilateral decision on land and resource use.

The process was voluntary, leaving stakeholders to decide whether it was in their best interest to participate. The vast majority of stakeholders chose to participate, and demonstrated high levels of commitment to making the process work; this is considered a key strength of the process. While participants feel that they personally were fully committed to the process (96%), less than half of participants (47%) perceive that the other participants were equally committed. Some participants note this lack of commitment as a weakness of the process. Of particular interest, is the frequency of concern expressed by participants about the lack of government commitment to the LRMPs.

The process encouraged inclusive stakeholder representation. Sixty-four percent of participants feel that all appropriate interests were represented, and only 13% strongly disagreed with that statement. In addition, participants identify the inclusion of multiple interests in an open and inclusive process as a key strength of the process. However, there are some concerns in this area. A number of participants are apprehensive over too many representatives from some sectors or interests and not enough representation for others. Participants also express concern that some representatives were not sufficiently connected to a clear constituency. These apprehensions suggest that some improvement could be made in stakeholder representation, inclusiveness, and effectiveness by including additional interests that were not represented, and by reducing the role of other interests that were over-represented.

Participants feel (73%) that they and the other representatives were accountable to their constituencies, and that the groups that they represented provided them with clear direction (68%). While participants were accountable, almost half (41%) indicate that the process design itself did not ensure accountability. In terms of accountability to the broader public, a slim majority (54%) believes the process was accountable, and only 57% feel the process had an effective strategy for public communication. This indicates the process could have done more to ensure participants were accountable to their constituencies and to the broader public.

Equality between stakeholders is a major concern. A strong majority of participants (78%) believe their participation made a difference in the outcomes of the process, and most (66%) feel that they had sufficient training to participate effectively. However, funding and power imbalances among participants remain an issue. Only 57% of participants felt they had sufficient funding, and only 34% of participants feel that all interests or perspectives had an equal influence during the CP process. In addition, more than half of participants (53%) feel the process did not reduce power imbalances among participants.

Principled negotiation, communication and the building of relationships and understanding among stakeholders are all identified by participants as key strengths of the LRMP processes. The process was very successful (83% agree) in encouraging open communication about participants' interests, and successful (78% agree) in fostering teamwork. Although successful, the process performed less well in terms of generating trust (56%), understanding (60%), and communication and negotiation skills (51%). Clearly, it is important that future processes ensure principled negotiation and respect among participants, and provide training to increase participants' skill levels in these areas.

Process participants had clear goals in mind when they became involved in the LRMP processes (77%). The development of collective goals through the process was also relatively successful. However, one-third of participants feel collective goals were not well established, and they identify the lack of clear goals and objectives as a weakness. This indicates additional effort would have been warranted in establishing clearer shared goals and objectives for the process.

Participants are pleased with the design and management of the processes in terms of structure (64%) and highly skilled support staff (85%). Independent facilitation in the processes was helpful when used (75%), and facilitators were generally skilled and unbiased (74%). In fact, process management including facilitation, chair, and strong support staff are identified by participants as key strengths of the processes. However, independent facilitation was not used in all LRMPs and used intermittently in others. Some participants identify ineffective process management or leadership, including facilitation, chair, and support staff, as weaknesses of their individual tables. Also, while still positive, fewer participants believe the support staff and lead agency demonstrated neutrality (62% and 64% respectively). These results emphasise the importance of skilled, independent, and unbiased management of such processes.

The LRMP process established by the provincial government provided a flexible framework that participants customized as necessary. Participants were encouraged to develop their own terms of reference at the beginning of each process. A strong majority of participants (75%) feel they were involved in the design of the process, and 61% feel they were able to influence the process design on an ongoing basis. Participants also indicate that both the procedural ground rules (80%), and participant roles (62%), were clearly defined. However, these results indicate that roles were not as clear as rules, and additional effort to ensure clarity of participant roles would have been beneficial.

Participants are divided when asked whether the time allotted to the process was realistic; 52% agreed, 48% disagreed. While a majority of participants (65%) feel that deadlines were helpful in moving their process along, a significant minority (42%) indicates that clear milestones were not established. The length of the processes and poor timelines are commonly identified as weaknesses of the LRMPs. Participants make several suggestions relating to streamlining the processes to improve efficiency. Some of these suggestions include establishing clearer objectives as described previously, improving facilitation, and increasing the use of independent process staff or external experts to do more preparatory work such as preparing information packages or drafts for participants to review.

Upfront design of the process seems more important than complete self-design by participants, particularly in light of efficiency. However, it is important to find the right balance between efficiency and effectiveness in accomplishing all of the process goals. For example, participants express frustration over the amount of time spent on process design and developing terms of reference. However, this time is an important phase of the process where participants develop their skills of principled negotiation, demonstrate respect, and begin to build trust and relationships among stakeholders prior to tackling the more difficult issues at hand. Participants also express concern that the government exerted too much control over the process. Thus, process managers should do as much as possible to provide participants with information, guidance, and tools to improve efficiency. However, they should do so without removing participants' control over the process design, nor the opportunity to 'warm up' before tackling the difficult issues.

Participants are almost equally divided as to whether they had enough high-quality information for decision-making; 53% feel they did, 47% feel they did not. However, good information, together with developing increased knowledge and understanding are identified as key strengths of the processes. In terms of tools for incorporating information into decision-making, participants generally used one, or both, of mapping resource values, and multiple accounts analysis. Participants are very positive about the use of overlay maps (91%) and moderately positive (62%) about the use of multiple accounts analysis. Results indicate that increased efforts to improve the quality of information and the effectiveness of its presentation to participants would have been valuable.

The LRMP process provides a new way of addressing problems, and participants report that creative solutions were produced. Participants also feel the process was flexible and able to adapt to new circumstances (74%). Results show, however, that increased flexibility and adaptability of the process are desired, particularly in terms of resource use zones or designations.

While some commitment to plan implementation existed, the strategies for implementation, and level of commitment could be improved. 63% of participants feel the table members shared a strong commitment to plan implementation, and only 45% feel the table developed a clear strategy to do so.

Results: Outcomes Evaluation

The overall level of agreement among participants in the B.C. LRMP process is high. Full consensus was achieved in 12 of the 15 completed LRMPs, consensus minus one (97.5% stakeholder agreement) was achieved in two, and in one process consensus was reached on the majority of plan elements and options were provided to government on non-consensus items. The achievement of consensus was remarkable, given the high level of conflict that existed prior to the process.

Survey responses show that stakeholders considered the LRMP processes generally successful. Approximately two thirds of the stakeholders feel that the process was a successful and positive experience and 93% are positive about the involvement of the public in land and resource decisions and 68% support the use of consensus-based processes. 73% of stakeholders indicate a willingness to get involved in a similar process again.

The most important achievement cited by participants is reaching full or partial consensus on a plan. Agreement on, and creation of, protected areas is seen as a key part of the achievement. Participants are less positive when asked if they are satisfied with the outcome of the process and whether it addressed their interests. Only 56% were satisfied with the outcome and 59% felt their interests were met. Given that complete or nearly complete consensus agreements were reached in all of the completed processes, the response, while positive, is lower than expected. This may be a reflection of slow progress in implementation, deferment of agreement on some controversial issues or uncertainty over changing government policy and priorities. Alternatively, this could perhaps be an inevitable outcome of consensus negotiation, where all parties are required to compromise to reach an agreement. No one group would meet all its objectives. Within this context, then, the fact that the majority (59%) of participants felt that the resulting plan addressed the needs of their group is very positive.

Participants believe the CP process was the best way of developing a plan (69%), and 56% feel their interests were better accommodated than they would have been through other planning methods. Participants indicate that various publics benefited most from the outcomes of the process. A large proportion of participants also identify various conservation interests as the primary beneficiaries while an equal proportion identify resource user or industry interests as the primary beneficiaries. Again, this is perhaps an inevitable part of the negotiating process where the issues are complex and all participants are forced to compromise. The balance between conservation and resource user interests, and the inclusion of all other interest groups, indicates that the process was successful in achieving a reasonable compromise that balanced the interests of most, if not all, stakeholders.

The LRMP processes provide an opportunity to test and to learn from new ideas and approaches to decision-making and land and resource management. A strong majority of participants (72%) feel the LRMP planning process produced creative ideas for action. In addition, while a survey of those external to the process has not been conducted, a strong majority of participants (71%) also believe the outcomes of the LRMP process served the common good or public interest.

Surprisingly, the process was not perceived by participants as strong at reducing conflicts as one might expect. Participants are almost equally divided when asked whether conflict over land use in the area decreased as a result of the LRMP process; 53% feel conflict was reduced. Having a significant proportion of participants feeling that conflict has not been reduced (47%) could be a reflection of the fact that many difficult issues were left to be addressed during implementation or under subsequent operational planning on a smaller scale.

Participants identify what they perceived as key barriers to effective implementation of the plans. These include a lack of government commitment, a lack of full agreement or commitment of participants, and interference by those not involved in process. This indicates that while the outcomes of a consensus-based process are expected to be easier to implement, commitment to the agreement is required by all parties to ensure smooth implementation.

The processes were a major success in achieving benefits such as learning and relationship building. Increased access to good information, and developing increased knowledge and understanding, are identified by participants as significant achievements of the process. A large majority of participants (87%) find information acquired through the process to be useful for purposes outside of the LRMP. Participants indicate that as a result of the process they gained better understanding of the interests of other participants (96%), their region (91%), and how government works (84%). Eighty-seven percent of participants also indicate they gained new or improved skills as a result of the process.

The creation of new personal and working relationships and contacts is another outcome that the process produced successfully. Seventy-nine percent of participants feel relationships improved during the process. Eighty-four percent indicate they have better working relationships, and 85% indicate they have more useful contacts as a result of the planning process. The use of principled negotiation is viewed by participants as a key strength of the process and very important to the building of relationships and understanding among stakeholders. The LRMP processes resulted in positive second order effects including changes in behaviour (71%), and 61% of participants are aware of spin off partnerships or collaborative activities, which resulted from the CP process. Thus, there is potential for continued gains from the LRMP processes as stakeholders look for and create new opportunities for collaboration and new creative solutions.

Designing an Effective Collaborative Planning Process

This study shows that a CP process is a complex system that requires achievement of a broad range of criteria to be successful; there is no single factor that determines the success. Careful planning that attends to each of these factors is crucial to realizing desired outcomes. The survey participants identified and rated key factors determining the success of a CP process. The checklist below (table 3) highlights the key factors that must be attended to ensure a successful CP process and outcomes.

Table 3. Checklist for Effective Collaborative Planning.

✓	Incentives to participate and reach agreement
✓	Inclusive representation of all relevant interests
✓	Effective representation of all relevant interests
✓	Voluntary participation
✓	Commitment of all participants to the process
✓	Commitment to implementation and monitoring of the agreement
✓	Clearly defined consequence or alternative outcome if consensus not reached
✓	Urgent and significant issues
✓	Principled negotiation including mutual respect and trust
✓	Consensus requirement
✓	Participants have a clear understanding of their own and others' interests
✓	Accountability of representatives to their constituencies
✓	Accountability and openness of process to the public
✓	High quality information and analytical tools for decision making
✓	Process ultimately designed by participants but with use of a clear framework
✓	Clearly defined purpose and objectives
✓	Clear rules of procedure
✓	Participants having equal opportunity & resources
✓	Effective process management (including chair/coordinator/support staff)
✓	Use of an independent facilitator
✓	Clear timetable (including deadline for reaching agreement)
✓	Process design that is flexible and adaptive

Several themes in this list require elaboration. First, it is critical to ensure stakeholders have sufficient incentives to negotiate and reach agreement. Having a clear alternative, or default, decision-making process in place helps to create clear BATNAs to motivate stakeholders to participate and to commit fully to a CP process. In the case study, the awareness that government would make a unilateral decision in the absence of a stakeholder agreement was a crucial motivating factor. This was reinforced by making stakeholders aware that the government was committed to the process and to the implementation of process outcomes.

Two other factors external to the formal land use planning processes were also important in affecting BATNAs. The threat of environmentally motivated international boycotts of BC forest products reduced the attractiveness of the status quo and encouraged B.C. forest companies to participate in the land use planning processes to seek a consensus with environmental interests in an effort to reduce the boycott threat (Gunton 1998). The commitment by the provincial government to set up a special fund to guarantee alternative employment for forest workers who may be laid off due to

land use changes was also important in reducing opposition to land use planning (Gunton 1998). Including a “no losers” strategy such as the forest workers fund is a key instrument in increasing the probability of success.

Second, the process must be well designed with an effective structure from the beginning that has clear goals, objectives, roles, and rules of procedure. At the same time, participant design of the process must be maintained to enable adaptability, commitment, and creativity. However, the case study results show that the bias in achieving this balance between predesign and self-design structure should favour predesign. Stakeholders clearly felt that the LRMP process could have benefited from clearer structure at the beginning of the process and less discussion of structure options.

Third, the process must be managed effectively and provided with sufficient support and resources. An independent and skilled support staff, including facilitators, is vital. It is also critical that this staff be neutral and that they ensure all participants are given the support required to participate effectively.

Fourth, the process must be managed with clear timelines and deadlines, and streamlined to maximize process efficiency to minimize participant burnout. The timelines must be realistic. This was a problem in the case study, as none of the processes were completed within the specified timelines. The lessons learned from past tables should be applied through more effective time management, setting realistic deadlines, and through better communication of those timelines in current and future processes.

Fifth, the process must ensure inclusive representation. The appropriate mix of stakeholders is key to ensuring all interests are represented in a balanced fashion. A good stakeholder structure and management are also required to ensure accountability to clear constituencies and to the public. The amount of attention given to any discrepancies in the areas of representation and accountability in the review of the LRMP processes demonstrates how fundamental they are to the success of these processes.

Sixth, it is critical to address the issue of equality among stakeholders. There are several initiatives that can be useful, including providing funding, training, support, and other required resources to help all representatives participate effectively. Training in principled negotiation and tools for decision making are particularly important. Strong process facilitation can also help to ensure principled negotiation and equality at the collaborative planning table. This is clearly a significant issue in the LRMP processes, and while efforts were made, additional attention is clearly required.

Seventh, accountability of the process to the broader public must be ensured. This increases the probability that the broader public understands how decisions are taken, and that the interests of the broader public are included in decision-making and final plan recommendations.

Eighth, the process agreement must include a commitment to implementation and monitoring. This commitment, together with a clear strategy and accountabilities, must be established during the process, and must be included in the final plan or agreement. This is critical to ensuring the feasibility and success of plan implementation by addressing difficulties in plan interpretation. A monitoring plan can be used to help ensure that all parties adhere to their areas of accountability.

Finally, it is important that records be maintained of planning processes so that those external to the process can understand who was involved and how decisions were made. This is important in gaining support for the resulting plans, and provides the opportunity for improvement by learning from the experiences of each table.

Conclusion

Overall, the experiment with the collaborative planning process in land use planning in British Columbia was a remarkable success in promoting agreement among stakeholders who during the 1980s had become antagonistic and conflictive. CP allowed stakeholders to move from intense conflict to respectful negotiation. The outcome has been consensus, or near consensus, land and resource use plans for almost all of rural British Columbia. CP also produced additional benefits including improved relationships, increased understanding, and networks among diverse stakeholders. Significant learning took place, and information and knowledge were shared. Participants developed skills and an understanding of collaborative tools for future decision-making. In sum, the case study evaluation confirms these benefits associated with the systematic application of CP.

The case study also identifies the limitations of CP and the keys to successful CP management. Default decision processes are essential to discourage delaying tactics and to motivate participants to reach agreement at the negotiating table. An effective CP process requires clear objectives, clear structure, realistic timelines, and adequate staff and

information resources. The process requires broad stakeholder participation and measures such as training and financial assistance to reduce inequalities between stakeholder groups. The process must be accountable to the broader public through a complementary public participation and retention of final decision-making by democratically accountable bodies.

The British Columbia experience demonstrates that, if such issues are addressed, CP processes are a feasible and valuable tool for the resolution of conflicts associated with land and resource use planning. It lends additional support to those advocates who say CP processes can be powerful tools for resolving conflict and for developing shared visions on the management of public resources. In particular, it provides additional evidence of many of the unique benefits of CP processes beyond agreements. It is these additional benefits that may be critical tools in the longer-term pursuit of sustainability. These processes can integrate social, economic, and environmental principles and goals. They also can increase the capacity of participants, and result in a system that can adapt more creatively to change. This capacity is increased through the development of shared intellectual and social capital, new innovations, creative solutions, and dynamic learning and change. Thus, CP processes can help to promote stability through increased understanding and respect, and an ability to adapt to changing circumstances. The experience in B.C. demonstrates that, while not a panacea, nor easy, CP processes are a feasible and valuable tool for the resolution of conflicts and for sustainable public land and resource use planning.

However, this process should only be viewed as the first step in the transition toward sustainable use of Crown land and water. It buys society time to adopt more sophisticated management systems, which will be necessary in the move toward sustainability. It enables the recently developed plans to be refined and adapted to changing conditions over time. To detect such change, new, sophisticated data monitoring systems must be developed to track environmental changes, and exogenous change related to global warming and changing markets for the products of the land need to be assessed. Armed with these kinds of up-to-date knowledge, society will be better prepared to confront the challenges of sustainable management through the adoption of adaptive management systems. Ongoing collaborative planning should be a fundamental component of these emerging management systems.

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APPENDIX: Survey Results**Answers to Closed Questions - Percentages and Scores Sorted by Criteria**

legend:	weight for score	
SA= % Strongly Agree	+2	
SWA=% Somewhat Agree		+1
SWD=% Somewhat Disagree	-1	
SD=% Strongly Disagree	-2	

Score ranges from -2 to 2 indicating the degree to which the process met (positive) or did not meet (negative) the criteria.

Note: scores for negatively phrased questions have been adjusted to reflect the degree the criterion is met.

Process Criteria: Score and Results Presented as Percentages

	SA	SWA	SWD	SD	Score
Purpose and Incentives					
I became involved in the process because I/my organization felt it was the best way to achieve our goals/ with respect to land use planning.	52%	36%	9%	3%	1.25
The issues we were dealing with in the LRMP process were significant problems requiring timely resolution	52%	34%	9%	5%	1.19
Stakeholders had a clear understanding that if no consensus was reached, the provincial government would make the decisions.	62%	24%	10%	4%	1.30
I had clear goals in mind when I first became involved in the LRMP process.	39%	38%	18%	5%	0.89
The process participants collectively identified and agreed upon clear goals and objectives.	20%	45%	22%	14%	0.34
Inclusive Representation					
All appropriate interests or values were represented in the process.	29%	35%	23%	13%	0.43
All government agencies that needed to be involved were adequately represented.	38%	30%	19%	13%	0.62
Voluntary Participation and Commitment					
I was fully committed to making the process work.	70%	26%	4%	1%	1.60
All participants were committed to making the process work.	15%	32%	28%	25%	-0.16
Self Design					
I was involved in the design of the LRMP <i>process</i> (i.e. ground rules, roles, procedures).	42%	33%	11%	14%	0.76
On an ongoing basis, I was able to influence the <i>process</i> used in the LRMP.	18%	43%	23%	16%	0.24
Clear Ground Rules					
Participant roles were clearly defined.	25%	37%	27%	11%	0.39
The procedural ground rules were clearly defined.	35%	45%	15%	6%	0.88
Equal Opportunity and Resources					
I had or received sufficient training to participate effectively.	29%	37%	22%	13%	0.48
I had or received sufficient funding to participate effectively.	31%	26%	20%	23%	0.21
All interests/perspectives had equal influence at the LRMP table.	13%	21%	24%	42%	-0.63
The process reduced power imbalances among participants.	11%	36%	26%	27%	-0.22
My participation made a difference in the outcomes of the LRMP process.	35%	43%	12%	10%	0.81
Principled Negotiation and Respect					
The process encouraged open communication about participants' interests	41%	42%	11%	7%	1.00
All participants demonstrated a clear understanding of the different stakeholder interests around the table.	17%	43%	25%	15%	0.23
The process generated trust among participants.	14%	42%	25%	19%	0.08
The process fostered teamwork.	19%	49%	23%	9%	0.46
The process was hindered by a lack of communication and negotiation skills.	13%	37%	25%	26%	0.14
Accountability					
Due to constraints of the process, I was unable to effectively communicate with and gain support from my constituency.	8%	19%	36%	37%	0.74
The organization/sector/group I represented provided me with clear direction throughout the process.	23%	45%	18%	13%	0.48
Generally, the representatives at the table were accountable to their constituencies.	16%	57%	19%	8%	0.55
The process helped to ensure I was accountable to the constituency I was representing.	16%	42%	26%	15%	0.19
The process had an effective strategy for communicating with the broader public.	17%	40%	29%	15%	0.16
The process was effective in representing the interests of the broader public.	14%	40%	28%	18%	0.04

	SA	SWA	SWD	SD	Score
Flexible, Adaptive, Creative					
The process was flexible enough to be adaptive to new information or changing circumstances.	25%	49%	17%	9%	0.63
Participants were given the opportunity to periodically assess the process and make adjustments as needed.	23%	47%	21%	9%	0.55
High Quality Information					
The process lacked adequate high quality information for effective decision-making.	14%	32%	28%	25%	0.17
The process was well prepared with the information needed to accommodate protected areas within the LRMP.	20%	35%	26%	20%	0.09
The overlay of resource values on maps was a useful technique for evaluating land use options.	45%	46%	5%	4%	1.23
The multiple accounts method was a useful way of evaluating land use options.	12%	50%	23%	15%	0.23
Time Limits					
The time allotted to the process was realistic.	19%	33%	25%	23%	-0.01
The process had a detailed project plan (for the negotiation process) including clear milestones.	20%	38%	30%	12%	0.25
Deadlines during the process were helpful in moving the process along.	23%	42%	19%	17%	0.34
Commitment to a Plan for Implementation					
At the end of the process, the table participants shared a strong commitment to plan implementation.	28%	35%	18%	19%	0.34
The table developed a clear strategy for plan implementation.	16%	39%	29%	16%	0.10
Effective Process Management					
The process was hindered by lack of structure.	10%	26%	38%	26%	0.46
Process staff (including facilitator(s) if used) were skilled in running meetings.	42%	43%	11%	5%	1.06
Process staff acted in a neutral and unbiased manner.	29%	33%	20%	17%	0.37
The agency responsible for managing the LRMP process acted in a neutral and unbiased manner.	29%	35%	21%	15%	0.41
Independent Facilitation					
The presence of an independent facilitator/mediator improved process effectiveness.	44%	31%	15%	10%	0.86
The independent facilitator/mediator acted in an unbiased manner.	41%	33%	14%	12%	0.79

Outcome Criteria: Score and Results Presented as Percentages

	SA	SWA	SWD	SD	Score
Perceived as Successful					
The LRMP process was a positive experience.	36%	32%	17%	15%	0.56
The LRMP process I participated in was a success.	30%	34%	17%	19%	0.38
I am satisfied with the outcome of the process.	23%	33%	21%	23%	0.11
Agreement					
The resulting plan addressed the needs, concerns, and values, of the group I represented.	17%	42%	16%	25%	0.11
Conflict Reduced					
As a result of the LRMP process, conflict over land use in the area has decreased.	12%	41%	20%	27%	-0.08
Superior to Other Methods					
The LRMP process was the best way of developing a land use plan.	32%	37%	18%	13%	0.57
My/my organizations' interests have been accommodated better through the LRMP process than they would have been through other means.	24%	32%	25%	19%	0.18
Creative and Innovative					
The planning process produced creative ideas for action.	26%	46%	20%	8%	0.61
Knowledge, Understanding and Skills					
As a result of the process, I have a good understanding of the interests of other participants.	54%	42%	3%	0%	1.48
As a result of the process, I have a better understanding of my region.	50%	41%	6%	3%	1.30
As a result of the process, I now have a better understanding of how government works with respect to land and resource management.	41%	43%	13%	3%	1.04
I gained new or improved skills as a result of my involvement in the process.	44%	43%	10%	3%	1.16
Relationships and Social Capital					
The relationships among table members improved over the course of the process.	37%	41%	13%	10%	0.82
I have better working relationships with other parties involved in land use planning as a result of the LRMP process.	36%	48%	10%	6%	0.98
Contacts I acquired through my participation in the LRMP process are useful to me and/or my sector/organization	35%	50%	9%	6%	1.00
Information					
Information acquired through my participation in the LRMP process is useful to me and/or my sector/organization	36%	51%	9%	4%	1.06
I have used information generated through the LRMP process for purposes outside of the process.	29%	54%	9%	8%	0.88
The LRMP process produced information that has been understood and accepted by all participants.	15%	45%	24%	16%	0.18
Second-Order Effects					
I have seen changes in behaviours and actions as a result of the process.	21%	50%	21%	8%	0.54
I am aware of spin-off partnerships or collaborative activities or new organizations that arose as a result of the process.	19%	42%	24%	16%	0.25
Public Interest					
I believe the outcome of the LRMP process served the common good or public interest.	34%	35%	15%	17%	0.54
Understanding and Support of CP Approaches					
The government should involve the public in land and resource use decisions.	66%	27%	5%	2%	1.51
I believe that consensus based processes are an effective way of making land and resource use decisions.	37%	31%	15%	16%	0.57
Knowing what I know now I would get involved in a process similar to the LRMP again.	42%	31%	10%	17%	0.72